CASHING IN
On The
REAL ESTATE
BUBBLE

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Links to the Stock Market

How is it possible that the mortgage industry has been able to lend so much money to so many under-qualified consumers? Even back in the late '90s when the economy was "booming," it was much more difficult to obtain mortgages than today. With few options remaining to fuel its phantom recovery, *Washington has permitted this industry to engage in irresponsible lending practices to increase access to credit.*

This unprecedented credit boom has not only fueled consumer spending, but has also boosted many industry wages—financial, real estate, auto, and retail. *Hence, without this real estate bubble, there would be very few signs of improvement in the economy since 2001.*

As well, remember that the majority of Washington's discretionary spending since 2003 has been for Iraq, Afghanistan, Katrina, and homeland security—none of which contributed to a direct improvement in living standards, as normally implied by GDP numbers.

Therefore, *if we adjust for the effects of spending due to credit released from the real estate bubble and due to government expenditures that have not resulted in a net improvement of economic benefit, America has actually registered negative GDP growth since at least 2003.* Yet, aided by the loose monetary policies of Alan Greenspan, the financial industry has helped create

Washington's illusion of a recovery.

Securitization of the Credit Bubble

Over the past two decades, the consumer finance industry has become so specialized that most loans now pass through several hands after they are originated. Today, all consumer and mortgage loans are packaged into special types of securities sold to institutions in transactions outside of the stock and bond markets.

In the process, thousands of loans are combined into a single debt product and then sliced into smaller securities, each with different credit rankings. This allows financial institutions to mask very risky sub-prime loans within a package of higher quality loans. The problem is that institutional investors have been buying very risky securities without realizing it.

It's been the strength of this market for hybrid debt products that has provided massive liquidity to banks. In large part, the strong demand for these investment products has led to the swelling of the real estate and credit bubbles.

The process of converting these loans into investment-grade securities of variable risk is called *securitization.* It's the process used by banks to package otherwise unmarketable credit card debt, mortgages, auto loans, business lease payments, tax liens, and many other debt payments into what are categorized as investment-grade securities. Once these loans have been securitized, they are transformed into collateralized securities backed by cash flow payments of the borrowers.

When this debt has been securitized from auto loans, collection notes, business loans, royalties, TV syndication deals, or virtually anything else with a revenue stream (except mortgages) they are known as *asset-backed securities.* These securities are then sold to institutional investors via out-of-

market transactions (not occurring in the stock and bond markets) on what is known as the asset-backed securities (ABS) market. Mortgage loans securitized in a similar manner are known as *mortgage-backed securities* (MBS) and are bought and sold often by the same institutional investors on the mortgage-backed securities market.

The vast majority of MBS exist due to the upstream liquidity provided by Fannie Mae, Freddie Mac, and Ginnie Mae (known as GSEs). Together, these three government agencies are responsible for securitizing and marketing the majority of America's $11 trillion of outstanding residential mortgage debt. Once packaged and rated for credit risk, institutional investors supply the downstream liquidity needed to keep the cycle running through their purchase of these securitized mortgage products from the GSEs.

Meanwhile, loan origination companies get cash to issue more loans. In short, *the asset- and mortgage-backed securities markets (collectively known as the collateralized securities market) serve as a perpetual money machine that has fueled the massive credit and real estate bubbles seen today.* But once again, the true risk of many of these loans has been hidden by the sketchy securitization process adapted for collateralized securities.

Secondary Mortgage Market

The same financial institutions that originate mortgage loans are not required to service the loans. In fact, over the past two decades the rapid growth of America's financial system has led to a new trend whereby most banks that originate loans sell them to other companies in exchange for cash to originate more loans. This has given rise to the *mortgage servicing industry*, which is now larger than the *loan origination industry.* Together,

both industries comprise the *primary mortgage market*.

Closely associated with the primary market is the *secondary mortgage market*, which specializes in buying and selling mortgages packaged in bulk and sold to institutional investors on the MBS market. The mortgage servicing industry works closely with the providers of MBS to ensure these investment products meet certain standards. As well, the industry makes sure timely payments are made.

The system of operations is similar for the ABS market. *Incidentally, government-sponsored student loans are the least risky of all collateralized securities, and possibly the safest equity investment one can make in a financial company due to the guaranteed repayment requirement set forth by Congress.*

Unlike other collateralized securities, debtors who owe money to Sallie Mae cannot get out of their debt under any circumstances, including bankruptcy. This publicly traded company even has the power to garnish Social Security benefits until the loans have been paid off. This is in contrast to the remaining types of collateralized securities, which can be eliminated through bankruptcy (although now more difficult). In contrast, it's still very easy for home owners to walk away from their mortgage debt with no major ramifications other than the loss of their home.

The MBS Money Machine

The first mortgage-backed securities were created during the 1970s by the former Salomon Brothers, when housing demand was greater than the availability of credit. Basically, the mortgage cash-flow cycle works like this: homebuyers go through a mortgage broker who advertises the loan applicant to larger financial institutions, who then place competitive bids for

the loan. This broker collects origination and other fees.

Next, a finance company buys the loan and places it among thousands of similar loans to create a mortgage-backed security (MBS). The company gets some agency to oversee the process and receives a rating on the loan based upon the individual credit records of the borrowers.

Typically, financial institutions will use a cooker-cutter formula to determine loan suitability, while the home buyer's interest rate is based upon the perceived risk of default. Then an investment banker underwrites the security and markets the deal to institutional investors, slicing each security into different levels, each with a different risk level.

Institutional investors purchase the debt slice of their choice based upon the amount of risk exposure they want. In return, these investors receive principal and interest payments from the home owner's monthly mortgage payments. When home owners obtain home equity loans, a similar process occurs. However, home equity loans are often (but not always) placed into the ABS category, secured by the equity from the home.

Bigger than the Stock and Bond Markets

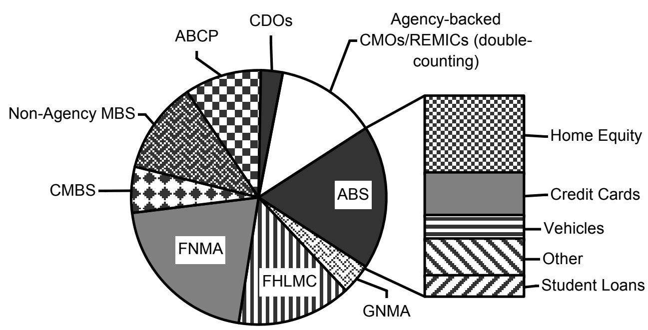
The MBS and ABS markets have exploded over the past two decades and are now considered among the biggest investment markets worldwide. Most consumers aren't aware of them since these securities aren't publicly traded like the stock and bond markets. Rather, ABS and MBS are typically bought via out-of-market transactions by pensions, insurance funds, mutual funds, hedge funds, and other financial institutions.

But since the primary companies involved in securitization of ABS and MBS are publicly traded, (Freddie Mac, Fannie Mae, and Ginnie Mae for MBS; Sallie Mae, Citigroup, Chase, and

Bank of America for ABS and some MBS) a significant portion of mortgage and consumer debt is indirectly linked to the stock and bond markets. As well, many hedge funds purchase riskier collateralized securities such as sub-prime mortgages and mortgage-based derivatives.

Figure 7-1 shows a breakdown of the $12 trillion collateralized securities markets, mainly made up of MBS and ABS. The entire pie excluding the ABS slice makes up the $9 trillion MBS market (note that 2006 data has increased to $11 and $4 trillion for MBS and ABS respectively).

Figure 7-1. Breakdown of Debt Type in the Collateralized Markets

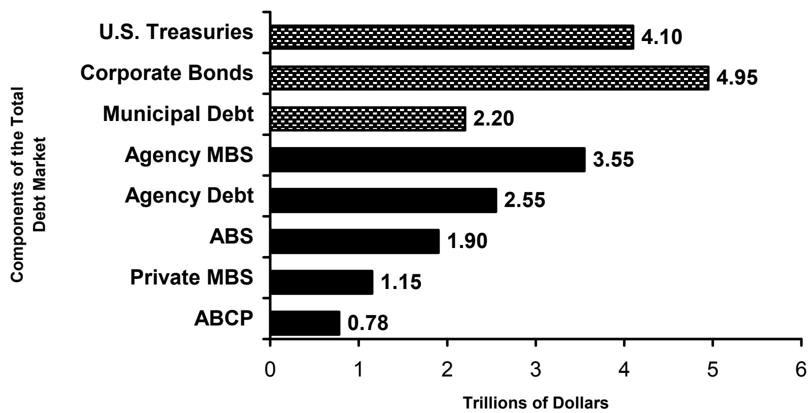


Based on a total $9.02 trillion total as of September 30, 2005

As you can see, the MBS market has become so large that it now dwarfs the $2 trillion ABS market (the extra $1 trillion comes from collateralized derivative securities). Note that the ABS market includes not only credit card and auto loan debt, but also student and home equity loans.

Figure 7-2 illustrates the size of the ABS and MBS markets relative to the publicly traded bond markets. As you can see, the $10 trillion MBS market alone (Agency MBS and Agency debt, private MBS, and ABCP) is larger than the corporate and U.S. government bond markets individually, and nearly as large as both of these markets combined. When you add the $1.9 trillion ABS market to the MBS market, the entire $12 trillion ($14 trillion 2006 data) collateralized market is larger than the U.S. government and corporate bond markets combined.

Figure 7-2. U.S. Capital Debt Markets
(selected components as of September 30, 2005)



As of June 30th, 2006, the estimated value of the collateralized securities market stood at over $14 trillion, while the total value of the U.S. stock market hovered around $13 trillion. Combined with the fragility of the economy, it should be easy to appreciate the enormous credit risk the collateralized

markets have generated.

Depending on how, when and to what extent the real estate and credit bubbles correct, large aftershocks could ripple throughout America's financial system, triggering massive stock and bond market sell-offs, as well as huge problems for Fannie Mae, Freddie Mac, and all other banks involved with ABS and MBS, depending upon their exposure.

Imagine for a moment how the stock and bond markets would react to a large number of bond defaults by corporations. Now think about how vulnerable the MBS and ABS markets are, given their direct links to the real estate and credit bubbles. Remember, *it's very easy to walk away from a mortgage with no real consequences to home owners.* But this is not the case with funds that have bought these loans.

MBS & ABS Markets Created the Bubble

While many think record low interest rates led to the housing boom, it was actually the enormous amount of liquidity generated by the ABS and MBS markets. This massive liquidity facilitated lax credit standards and ridiculous financing terms such as interest-only, high-loan-to-value loans (HLTV, where the borrower borrows up to 125 percent of the value) and ARM mortgages. Augmented by low rates and consumer greed, these irresponsible mortgage products have fueled the housing boom and much of consumer spending since 2002.

However, if financial institutions didn't provide demand for these securities as investments, many of the irresponsible lending practices would not have been possible. In fact, the overwhelming appetite for these securities spurred the growth of the sub-prime market as a way to feed this demand.

Similarly, it was the securitization of credit card and auto

debt that enabled financial companies to offer great rates. After all, most originating banks sold off the debt notes to institutional investors who provided them even more cash for new loan originations.

Yet, with so much importance to the economy, *neither MBS or ABS are subject to the strict reporting and disclosure requirements of the SEC since they aren't sold on public exchanges.*

Risks of Collateralized Securities

The great thing about the securitization process is that it creates liquidity and makes credit widely available to consumers and businesses at competitive rates—all of which helps drive the economy. And it accomplishes this through the securitization process, which ties repayment of principal and interest to investors.

In essence, securitization applies a financial process to consumer and small business loans, which makes them marketable to large investors. Hence, securitization is often an invaluable resource for generating abundant credit for economic expansions. However, it can also lead to busts if a sufficient number of consumers default on payments.

Noteworthy of mention are some of the shortfalls of the securitization process. For instance, securitization by no means eliminates the risk of collateralized loans. And it assumes their liquidity and marketability will remain in tact. As well, there is an enormous amount of guesswork that goes into structuring the risk of these loans. In short, GSEs and other financial institutions have to estimate how much revenue they can expect at any given time, how much money they need to back their bonds safely, and how much cash will remain as a profit. These

uncertainties create additional layers of risk, which are not always expressed when credit agencies rate them as investment securities.

Even the riskiest of these loans can be manipulated into AAA-rated debt and sold to pensions and other large funds because the same standards that apply to corporate debt are not applied to collateralized debt products. In addition, these ratings do not account for whether investors will receive a return on principal. Finally, since companies that securitize these loans are not regulated like banks, they do not have a capital requirement that would ensure adequate reserves to fund payments to investors.

Government-Sponsored Enterprises

GSEs are corporations that were created by Congress to increase Americans' access to mortgage loans. There are three GSEs and several related agencies: the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac), and the Federal Home Loan Bank (FHLB) system.

Fannie Mae was created in 1938 during the Great Depression to help Americans afford housing. It sells conventional mortgages as well as those insured by the Federal Housing Administration (FHA). Freddie Mac was established in 1970 for the purpose of providing more funds to lenders.

As far as the real estate and mortgage industries are concerned, the primary function of the GSEs are to sustain a liquid mortgage market. As we have seen, the primary mortgage market is created by banks and other lenders providing financing for mortgages. But without a place to go, these creditors would soon run out of funds to loan new customers.

So in order to keep mortgage cash flows robust, GSEs (Fannie Mae, Freddie Mac, and Ginnie Mae) buy these origination loans so banks can generate cash to approve more loans. The GSEs then securitize and sell the loans to banks, pensions, and other large investors.

But once securitized, the GSEs and many large banks also restructure some of these debt products into derivatives, which are also sold to investors. Overall, *the secondary mortgage market (the GSEs) generates money for lenders (the primary mortgage market) to continue supplying mortgages to consumers.* As well, it provides a huge source of investment products to large institutions

The original intended purpose of the GSEs was to focus on affordable housing for the private sector. Yet, dozens of studies have shown that Freddie and Fannie have been supplying funds to the overall market. Therefore, *the GSEs have been a significant stimulus for the rapid growth of the sub-prime loan market that has contributed to the enormous risks we see within the real estate bubble.*

Why GSEs are Dangerous

As confirmed by the Office of Federal Housing Enterprise Oversight (OFHEO), an arm of the government that regulates Fannie Mae and Freddie Mac,

> *"The housing market contributed significantly to the Nation's economic recovery. Falling mortgage rates stimulated housing starts and sales, and many refinancing borrowers took out loans that were larger than those they paid off, providing additional funds for consumption expenditures."*

Because Fannie and Freddie lack sufficient government oversight, they have not maintained adequate capital reserves needed to safeguard the security of payments to investors. And

due to their exemption from the SEC Act of 1933, they are not required to reveal their financial position. In fact, *they are the only publicly traded companies in the Fortune 500 exempt from routine SEC disclosures required for adequate transparency and investor accountability.*

Due to their exemption from the Act of '33, they are not required to adhere to the rules governing tender offers and public reporting of insider stock transactions. And they are not required to register their MBS and debt offerings with the SEC, which diminishes transparency further. As a result, there is question as to whether they are exposing themselves to excessive risk.

Fannie and Freddie hold between 20 to 50 percent of the capital required by bank regulators for depository institutions holding mortgages. As of 2003, the GSEs had $1.6 trillion in combined assets, $1.4 trillion in retained mortgages in their portfolios, $1.5 trillion in outstanding debt, and $1.5 trillion in derivatives. In addition, outstanding MBS generated by the GSEs but held by third parties totaled $1.7 trillion. The dollar amount of mortgage-related derivatives is unknown but is most likely much higher.

What would happen if the GSEs got into financial trouble? Not only would investors get crushed, but taxpayers would have to bail them out since the GSEs are backed by the government. Everyone would feel the effects. With close to $2 trillion in debt between Freddie Mac and Fannie Mae alone, as well as several trillion held by commercial banks and funds, *failure of just one GSE or related entity could create a huge disaster that would easily eclipse the Savings & Loan Crisis of the late 1980s.*

Furthermore, the GSEs have created very risky derivatives exposures for themselves and many financial institutions.

Fannie Mae has taken about half of its MBS and pooled them into another security called a Real Estate Mortgage Investment Conduit (REMIC), otherwise known as a restructured MBS or Collateralized Mortgage Obligation (CMO). These securities are complex derivatives and considered very speculative.

According to recent data, the total derivative exposure for the U.S. capital markets stands at nearly $300 trillion. However, it's not known for certain what the net exposure is. In other words, it is uncertain how much of these derivatives are used as hedging securities versus leverage. As a simple example, if $1 million in derivatives are in call options for Microsoft stock with the same strike price and expiration as another $1 million in put options, the net derivatives exposure is 0. It's not known with certainty how much of these derivatives are in mortgage-related securities since they are difficult to track. But even a 5 percent net exposure would be huge.

Now I want you to stop and think for a minute about all of the fraudulent practices that have occurred within the housing industry, from known problems of poor workmanship and cheap materials by some builders, to inflated appraisals performed to generate ease of lending to support cash-out deals.

From inflated appraisals alone, 10 to 15 percent of MBS securities or up to $1.5 trillion have been overvalued by conservative estimates. Combine that with the lack of transparency, questionable risk exposure and fraudulent practices by executives at Fannie and Freddie, and you have a disaster ready to strike.

Now combine that with over 16 million Americans holding interest-only and ARM mortgages, throw in a million or two job losses due to say the failure of Delta, Ford, General Motors, or some other large company, and you could end up with a blowup

in the MBS market. This would certainly devastate the stock, bond and real estate markets. Most likely, there would also be an even bigger mess in the derivatives market, leading to a global sell-off in the capital markets. Needless to say, the dollar would take a huge dive and interest rates would soar to double-digits.

Troubles Already Showing

Lack of congressional oversight combined with inadequate transparency has already resulted in fraudulent activities within Fannie Mae, and its smaller peer Freddie Mac. Recently, Fannie Mae had to restate several years of earnings. And only in 2003 did it finally agree to register under the SEC Act of 1934 to provide annual and quarterly financial reporting. As a result, Fannie has had to restate earnings to the tune of nearly $11 billion from 1998 to mid-2004. The SEC has fined the company $400 million and the management is being investigated by the Department of Justice. *The SEC has a long track record of acting too little too late, and this could prove to be another example.*

Thus far, Fannie Mae was found to have misrepresented its risk position, acted irresponsibly, and manipulated earnings so executives would receive huge bonuses. Figure 7-3 shows that Fannie was able to meet earnings goals for all bonuses from 1996 to 2003. Box 7-1 shows a partial summary of the 311-page special report of the OFHEO's special investigation of Fannie Mae.

Lack of Government Controls

Given the lack of standards for traditional FRMs and interest-only ARMs, it seems odd that America's home ownership is not closer to 90 percent. Think about a person who pays $600 per month for an apartment; he can get a loan for

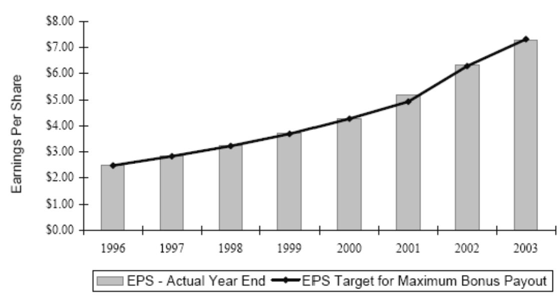
$200,000 and have lower monthly payments using an option-ARM.

The problem with this explosion of mortgage products in the midst of America's biggest housing bubble is that there is no one to provide financial guidance to homebuyers regarding the suitability and risk of these loans.

We have the NASD and SEC for the stock and bond markets. Why isn't there a similar regulatory agency to prevent consumers from making disastrous mortgage decisions? As well, one might ask why the government has not created an agency to protect consumers against unfair business practices by financial, energy, healthcare, and insurance industries.

For most Americans, a home is the largest and most important purchase they will make. Thus, I find it appalling that Washington has allowed the banking industry to exploit and mislead home buyers in the purchase of their most important and most costly asset. Of course, having the NASD and SEC did not prevent the Internet bubble, devastating accounting scandals, and hundreds of other episodes of large-scale fraud.

Figure 7-3. Fannie Mae's Earnings Consistently Met Earnings Targets for Executive Bonuses



Box 7-1. Summary of the Findings of OFHEO's for Fannie Mae

- Fannie Mae senior management promoted an image of the Enterprise as one of the lowest-risk financial institutions in the world and as "best in class" in terms of risk management, financial reporting, internal control, and corporate governance. The findings in this report show that risks at Fannie Mae were greatly understated and that the image was false.
- During the period covered by the OFHEO report—1998 to mid-2004---Fannie Mae reported extremely smooth profit growth and hot announced targets for earnings per share precisely each quarter. Those achievements were illusions deliberately and systematically created by the Enterprise's senior management with the aid of inappropriate accounting and improper earnings management.
- A large number of Fannie Mae's account policies and practices did not comply with Generally Accepted Accounting Principles (GAAP). The Enterprise also had serious problems of internal control, financial reporting, and corporate governance. Those errors resulted in Fannie Mae overstating reported income and capital by a currently estimated $10.6 billion.
- By deliberately and intentionally manipulating accounting to hit earnings targets, senior management maximized the bonuses and other executive compensation they received, at the expense of shareholders. Earnings management made a significant contribution to the compensation of Fannie Mae Chairman and CEO Franklin Raines, which totaled over $90 million from 1998 to 2003.
- Fannie Mae consistently took a significant amount of interest rate risk, and when interest rates fell in 2002, incurred billions of dollars in economic loses. The Enterprise also had large operational and reputational risk exposures.

By now you should realize Washington supports any industry that encourages consumers to spend. Creating an agency to help Americans make wise consumer finance decisions would destroy all the efforts the Fed has made to pump credit into the banking system.

But if the economy was truly healthy, Washington wouldn't need to rely on these cheap tactics. While producing deceptive gains in productivity via credit-driven consumer spending, the longer-term consequences are just one more straw added to the camel's back. And eventually the camel's back will break.

Conclusions

Housing prices are absolutely critical to the success of companies such as Lowe's, Home Depot, and Sears. As well, most banks are closely tied to the housing market, because one

way or another you can bet they have exposure to mortgage-backed securities. Some of financial institutions have a much larger risk exposure with real estate derivative products.

The real estate bubble is going to correct, without a doubt. The question is when, over what period, and by how much. We have seen how the housing market is linked to the $11 trillion MSB market. And due to the lack of controls, the MBS market stands as a tall and fragile house of cards poised to collapse.

A breakdown in just one of the GSEs is very possible and could result in a financial collapse of far greater magnitude and scope than Enron, triggering massive losses. We can only hope that the MBS market doesn't experience its first blow up since inception, but don't bet on it.